



60 – 80W, 790 – 830nm, the Pearl™ P16 series is designed primarily for Solid State Pumping. These pump diodes are designed to maximize fundamental mode extraction from solid-state lasers. A variety of DPSS laser geometries benefit when long-term mode stability and beam quality are critical.

These fiber-coupled high power pump diodes use a revolutionary fiber technology, PowerCore™, which delivers high-brightness, Gaussian or top-hat pump profiles to maximize overlap with the TEM<sub>00</sub> cavity mode for efficient brightness conversion to 1 μm. nLIGHT's high power laser diode provide industry-leading efficiency to enable compactness, reliability and simplified cooling for the next generation of solid-state laser systems. Pearl's embedded nXLT™ single-emitter technology is resetting the benchmark for high-brightness diode based laser reliability.

## Features

- 790 – 830nm, 60 – 80W
- Patented nXLT™ diode protection for extended life
- Low-current, fault-tolerant architecture
- Industry-leading wall-plug efficiency >50%
- Field-replaceable, PowerCore™ mode-stable fiber
- Plug and play compatibility with nLIGHT's DL system
- Electrically isolated housing

## Applications

- Rod lasers
- Disk lasers
- Slab lasers
- Green lasers
- High energy lasers
- Yag lasers
- YVO4 lasers
- Lasers for ordinance
- Military lasers

## Proven Performance

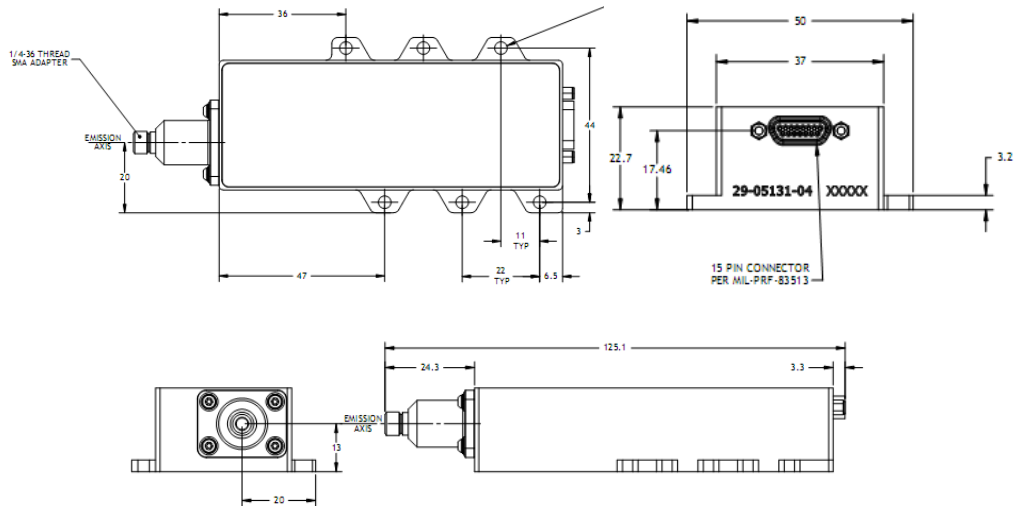
## Typical Device Performance

Package		P16		
<b>Optical</b>				
Wavelength	nm	790-830 nm		
Wavelength tolerance	nm	± 3		
CW output power	W	60	70	80
Fiber core diameter	µm	400 or 600		
Beam divergence	NA <sup>1</sup>	0.17		
Fiber length (standard)	m	2.0		
<b>Electrical</b>				
Power conversion efficiency (typical)	%	50		
Operating current (typical)	A	5.7		
Operating voltage (typical)	V	22.2	25.9	29.6
<b>Mechanical</b>				
Storage temperature range <sup>2</sup>	°C	-40 to +80		
Mass	gr	220		
<b>Thermal</b>				
Operating temperature <sup>2</sup>	°C	+15 to +35		
<b>Accessories</b>				
Line Generator Optic Modules				
Collimator and Spot Generator Optic Modules				
Monitor Photo Diode				
PPS™ OEM Diode Controller				
Turn-Key System				

<sup>1</sup> Numerical aperture (NA) is the sine of the half-angle encircling 90% of the optical energy from the fiber.

<sup>2</sup> A non-condensing environment is required for storage and operation.

**Package Dimensions**



\* 800um fiber 0.13NA configuration increases the length of P10 Package 10.06 mm

**CFR Regulation**

These components do not comply with the federal regulation (Title 21 CFR, Chapter 1, Subchapter J) as administered by the Center for Device and radiological Health. Purchaser acknowledges that their products must comply with these regulations before they can be sold to an end-use.



**Notice**

nLIGHT continually improves its products to provide our customers with outstanding quality and reliability. nLIGHT may make changes to specifications and product descriptions at any time, without notice. In addition, nLIGHT offers a limited warranty to ensure customer satisfaction. For complete details, please contact your nLIGHT sales representative.

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